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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,145	05/24/2001	Louis Dominic Oliveira	010080	2679
23696 7590 02/14/2008 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER GARY, ERIKA A	
			ART UNIT 2617	PAPER NUMBER
			NOTIFICATION DATE 02/14/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

09/865,145

Applicant(s)

OLIVEIRA, LOUIS DOMINIC

Examiner

Erika A. Gary

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5, 6, 8, 9, 12-15 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8, 9, 12-15 and 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 12 recites the limitations "the audio codec" and "the audio multiplexer" in line 5. There is insufficient antecedent basis for these limitations in the claim.

### ***Claim Objections***

3. Claim 14 is objected to because of the following informalities: on line 6, there should not be a period after "and". Appropriate correction is required.
4. Claim 23 is objected to because of the following informalities: the period is missing at the end of the claim. Appropriate correction is required.
5. Claim 24 is objected to because of the following informalities: on line 2, after "circuit", there should not be a space before the comma. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 5, 6, 8, 9, 12-15, and 28-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams, US Patent Number 6,594,366 (hereinafter Adams).

Regarding claims 1, 12, and 22 Adams discloses a method for processing received audio signals in a device, the method comprising: determining a type of an audio output device coupled to an I/O jack; determining a type of the received audio signals; wherein the determined type is one of voice, stereo, music, and mono music; and providing a control output to disable or enable a first channel in a receive audio processing path based on the type of the audio output device and the type of received audio signals [abstract; col. 1: lines 43-67; col. 2: lines 48-65; col. 3: line 46 – col. 4: line 25]. Further regarding claim 1, it is inherent that the device comprises an audio mux, the audio mux receiving a vocoder input from a vocoder and an audio decoder input from an audio decoder. The step of disabling components reduces power consumption.

Regarding claim 2, Adams discloses the control output is coupled to a plurality of components in a receive audio processing path of the codec [col. 1: lines 43-67; col. 2: lines 48-65; fig. 3].

Regarding claim 3, Adams discloses the plurality of components are in one of a right channel of the receive audio processing path and a left channel of the receive audio processing path [fig. 3].

Regarding claim 5, Adams discloses the control output disables at least one of the plurality of components to reduce power consumption in the receive audio processing path of the codec [col. 2: lines 48-65].

Regarding claims 6 and 9, it is inherent that the device includes a receive gain, receive filter, a digital to analog converter, a left/right selector, and a headset amp.

Regarding claim 8, Adams discloses the control output disables at least one of a plurality of components in a receive audio processing path of the codec when the audio mux input received by the stereo/mono control unit comprises voice signals [col. 2: lines 48-65].

Regarding claim 13, Adams discloses disabling the first channel in the receive audio processing path and enabling a second channel in the receive audio processing path when the type of the received audio signals is mono signals; and enabling the first channel in the receive audio processing path and enabling the second channel in the receive audio processing path when the type of the received audio signals is stereo signals, wherein the disabling of the first channel is performed by a stereo/mono control unit [col. 3: line 46 – col. 4: line 25].

Regarding claim 14, Adams discloses the disabling of the first channel is performed by the control output of the stereo/mono control unit disabling at least one of a plurality of components in the first channel; wherein one of the first channel is a right channel in the receive audio processing path and the second channel is a left channel in the receive audio processing path; and the first channel is a left channel in the receive audio processing path and the second channel is a right channel in the receive audio processing pat [fig. 3; col. 3: line 46 – col. 4: line 25].

Regarding claim 15, it is inherent that the device includes a receive gain, receive filter, a digital to analog converter, a left/right selector, and a headset amp.

Regarding claim 18, it is inherent that the device comprises a vocoder and an audio decoder, wherein the vocoder provides voice signals to an audio mux, and wherein the audio decoder provides music signals to the audio mux.

Regarding claims 19 and 23, it is inherent that the stereo/mono control unit receives the audio signals from the audio mux.

Regarding claim 20, Adams discloses determining whether a stereo output component is coupled to the device [col. 1: lines 43-67; col. 2: lines 48-65].

Regarding claim 21, Adams discloses disabling the first channel when the stereo output component is not coupled to the device [col. 1: lines 43-67; col. 2: lines 48-65; col. 3: line 46 – col. 4: line 25].

Regarding claim 24, Adams discloses a plug-in detection circuit, coupled to the stereo/mono control unit, for providing the plug-in detection input to the stereo/mono control unit [fig. 3: ref. 210].

### ***Response to Arguments***

8. Applicant's arguments filed 1/24/08 have been fully considered but they are not persuasive. Applicant argues that Adams does not teach reducing power consumption in an audio codec. However, the Examiner respectfully disagrees as Adams teaches disabling components based on whether the radio or telephone function is being used. Disabling components subsequently reduces power consumption. Further, the Examiner maintains that Adams also teaches a first input for receiving an audio multiplexer input that identifies whether a signal provided to the audio codec by the

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audio multiplexer is one of voice, stereo music, and mono music. The type of signal is determined by the sensing circuit. If a headphone is detected, the type of signal is identified as stereo music. If a headset is detected, voice or mono music is identified. Hence, as broadly interpreted, the limitations are read in the reference. Applicant argues that Adams does not teach a second input for receiving a plug-in detection input that identifies whether an audio output device coupled to an I/O jack is stereo capable or mono capable. However, the Examiner respectfully disagrees as Adams teaches a sensing circuit that determines whether a headset or headphone is installed. The headphone is stereo capable and the headset is mono capable. Adams teaches that the device is able to detect what is plugged in and provide the appropriate functionality [col. 1: lines 50-67; col. 2: lines 32-47]. The Examiner maintains that Adams teaches the claimed invention as Adams teaches enabling or disabling channels (this conserving power) based on whether the received audio signal is a stereo signal or phone call. The type of signal (voice, stereo, mono) is determined by the detection of the output device installed. Though Adams does not specifically mention a codec and audio multiplexer, it is inherent in the art (as admitted in Applicant's specification) that these components are in mobile devices.


### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erika A. Gary whose telephone number is 571-272-7841. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EAG  
February 6, 2008

  
**ERIKA A. GARY**  
**PRIMARY EXAMINER**